

AN ACCOUNT
OF
THREE CASES OF SUDDEN DEATH,
WITH
THE APPEARANCES ON DISSECTION,
AND
SOME ADDITIONAL OBSERVATIONS.

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AT a former meeting of the Society I related the cases of three persons who had died suddenly, and whose bodies I had been called on to examine ; and as the immediate cause of their death appears to be one not generally noticed by anatomists, I have great pleasure in complying with the request of the Society by detailing the circumstances again in this paper.

The first case occurred in September, 1806, in Mrs. C. a young lady at Greenwich, who while talking with her husband complained of being faint,

and desired to be laid down. She was led to the bed, and was supposed to fall asleep, as he still continued to support her. In about twenty minutes he rang for the servant, who, on entering the room, exclaimed — “ My mistress is dead ! ” So it unhappily proved ; and I was desired on the following day to investigate the cause of this most affecting event.

The head was first opened, and the brain carefully dissected ; but not the smallest vestige of disease could be perceived in any part of it.

On examining the trunk of the body, no morbid appearance presented itself in any of the viscera. The uterus was in a state of impregnation, so early, that the fissure in the ovarium, from which the ovum had escaped, was yet distinctly to be seen.

This apparent absence of any disease, led me to pay more particular attention to the state of the heart ; on opening which, I was much struck with its extreme flaccidity, and the entire emptiness of all its cavities, in neither of which was the smallest quantity of blood. There was blood however both in the vena cava, and in the pulmonary veins.

I had never, on any former occasion, seen the heart so completely empty. It is not unusual to find the ventricles shut up by muscular contraction, so as nearly to exclude blood from them ; but here

both auricles and ventricles were destitute of it, without either of them being in a contracted state.

It therefore appeared to me that this lady had died from a syncope, or rather, asphyxia, of a peculiar kind ; in which the action of the heart had ceased for want of the regular supply of blood from the returning vessels.

A few weeks after this occurrence, I was again called to Greenwich, to examine the body of an elderly man, who had recently recovered from a maniacal affection, and who, after falling suddenly from his chair, breathed short for a few minutes, and then expired.

I went to this dissection fully prepossessed with a persuasion that he had died of apoplexy ; and I was much surprised, when, on the most careful examination of the brain, I could find no morbid appearance, except an ossification of the falx, which must have been of long duration, and though it might in some degree account for his mania, could not at all account for his death.

I therefore proceeded to examine the body ; for immediately the circumstances of the former case occurred to my mind, and also to Mr. Harrison, who had been called to both patients, and was present at the dissections.

The state of the heart was exactly similar. All the cavities were empty, but uncontracted; and the vena cava was also empty to the distance of several inches from the auricle. No other appearance could be detected in any viscus, by which death could at all be accounted for.

The last case occurred lately in a lady who died shortly after having been delivered of twins. I was informed she had for some time entertained apprehensions that she should not survive her delivery. After the birth of the second child she appeared a good deal exhausted, and as the discharge of blood was very moderate, the accoucheur thought it best to defer the extraction of the placenta. She recovered a little; but about two hours afterward grew suddenly faint, breathed short, and died in about half an hour.

In this case I did not examine the head, nothing having existed to excite a suspicion of mischief there. All the viscera were free from disease. The uterus contained the placenta with a small quantity of blood. But all the cavities of the heart were in a state of relaxation and completely destitute of blood. There was no blood in the vena cava near the heart, and the emptiness of its ascending branch extended as low as the iliac veins.

In all these cases the heart itself, and its valves, were free from any disease or alteration of structure.

I have hitherto been able to find only two similar instances recorded by medical writers. One of these is mentioned by Bonetus, Sep. Anat. vol. i. p. 883. A woman, more than forty years of age, complained suddenly of dimness, noise in the ears, and head-ach. She soon after lost her voice and pulse, and died in four hours from the attack. She had previously laboured under pectoral complaints, and on opening the body, the lungs were found coated with coagulable lymph, and abounding with pus in their substance. But the most remarkable circumstance, and which alone explained the manner of her death, was, that neither in the heart, nor the adjoining vessels, was a drop of blood to be found. “*Neque cor, neque vasa adsita, vel guttam sanguinis continebant.*”

The other case is recorded by Morgagni, Epist. 48. Art. 44. and very much corresponds with the third of those I have related above. It was of a woman, who, during her pregnancy, had some presentiment that she should not survive her labour, although she had already been the mother of several children. She was delivered of a daughter; but the placenta did not come away. An hour afterward, she was suddenly seized with dejection of spirits, coldness, and loss of pulse, and died in an hour and an half from the attack. On dissection the heart was exceedingly flaccid; scarcely any blood was found in the auricles or right ventricle, and none at all in the left. “*Cor supra quod dici possit flacci-*

“ dum, nihil fere sanguinis in auriculis, dexteroque ventriculo, nihil autem prorsus in sinistro continebat.”

The state of the adjoining blood-vessels is not noticed.

The disease I have now described may perhaps be properly termed *asphyxia idiopathica*. The essential circumstances of it evidently denote a sudden loss of power in the vessels, and chiefly in the minuter ones, to propel the blood they have received from the heart. In consequence of which, this organ, after having contracted so as to empty itself, and then dilated again, continues relaxed for want of the return of its accustomed stimulus, and dies in that dilated state.

But it is remarkable that death was not produced instantaneously in either of these cases. So that it is probable the larger veins continued their office a little while after the attack; and that blood flowed from them for a short time, into the heart; feebly indeed, and in small quantity, but still enough to keep up a little action in it. It is also probable that the debilitated state of the extreme vessels, though sudden and great, was not complete at first; especially in the last of the three cases I have related, and in those quoted from Bonetus and Morgagni: but the action of the heart gradually failing for want of supply, that of the larger arteries would soon fail also, for the same reason, and death must then follow of course.

The flaccid state of the heart is probably produced by its own vessels partaking of the general debility, and thus inducing an atonic state of its muscular fibres.

The weakened state of the circulation through the pulmonary vessels will account for the short, or to speak more correctly, the feeble breathing, which commences with the attack, and continues till its termination.

Although I feel quite unable to account satisfactorily for the first production of such a disease, it nevertheless appears to me that these histories lead to some important practical conclusions. Such as have occurred to myself I shall take the liberty to point out. Others may probably be supplied hereafter by practitioners, who, aware of the nature of the disease, and called in immediately on its commencement, will direct their attention to its various circumstances, more particularly than may hitherto have been done.

The impropriety of taking away blood in such a case, is, I think sufficiently evident; nor indeed does it seem likely that an attentive practitioner would confound it with any in which that evacuation is called for. The state of the pulse, and particularly of the respiration, would be a sufficient distinction, and clearly point out the necessity of the most prompt and active measures to stimulate the extreme vessels,

to accelerate the returning blood, and to excite the nervous energy.

It would therefore be proper to lay the patient as speedily as possible in the horizontal posture, and to give internally some highly stimulating liquid; as brandy, wine, æther, volatile alcali, &c. and these should be given in a tepid state, lest their coldness, when first swallowed, should retard their salutary influence on the extreme vessels and nerves of the stomach. Spices may also be employed, and in this, as in many other cases, would probably be borne in larger quantities than are commonly exhibited. A scruple of the Pulvis Aromaticus, for example, may be given for a dose. Brisk friction of the surface of the body, and particularly of the extremities, should be employed, and the patient covered with warm blankets, taking care however, to leave the face open, and on no account to impede the freest possible access of pure air to the lungs. A hot bath might be of use in some instances; and it would probably be more effectual if it were prepared with salt water, or strongly impregnated with some stimulating ingredient, as capsicum, pepper, ginger, &c. But some discretion is certainly requisite in the employment of a hot bath, where great debility prevails, lest the exertion and fatigue attending its use, should increase the irritability in too great a proportion, and exhaust the remaining strength.

A pint or more of camphorated mixture thrown

up warm, as an enema, by means of a syringe, might also be of use. Some æther, or tincture of castor, or assafoetida, might perhaps be added with advantage. But in this, as well as in the employment of the warm bath, care must be taken not to over fatigue the patient; for no debility will be found more insuperable on many occasions, than that arising from fatigue. So that these remedies will perhaps be most useful after something stimulating has been given by the mouth, and is beginning to produce its effect.

Other means may be suggested by the particular circumstances of different cases; and where the nature of the attack is known, one cannot but hope it may in some instances be remedied. It is with this view I have brought the subject before the Society, and I shall feel highly gratified if these imperfect observations should be the means of bringing] forward more complete information respecting it, than I have been able to impart.

Some time after I had delivered to the Society an account of the above cases, I was conversing on the subject with my friend Mr. Charles Woodd, of Edgeware Road, who informed me that he had recently met with two cases which appeared to him very extraordinary, and which he could not help considering to be of a similar nature to those I had men-

tioned. When he related them to me, I was entirely of that opinion, and requested he would favour me with an account of them in writing, that I might lay them before the Society. This he has obligingly done, and as both cases terminated favourably, I have no doubt the Society will consider them as a valuable addition to the paper already alluded to.

“CASE 1.—At six in the morning of August 28, 1808, I was desired to visit Mr. A. who had been attacked about one o'clock, with an uneasy sensation in the thorax, difficulty of respiration, and a sense of extreme lassitude. I found him with a pulse hardly perceptible, and not more than twenty-nine in a minute, although the vessels of the skin, and tunica conjunctiva were loaded with blood. Previous to my being sent for, he had taken three large spoonfuls of Reymer's tincture (a very stimulating preparation), and one bottle of a mixture which he generally kept by him, having been subject to spasms, and which contained mist. camph. 3vj. sp. lav. c. 3ss. sp. ammon. c. ʒiij. The anxiety still increasing, he took three tea spoonfuls of what appeared to be camphorated liniment, and some brandy. Notwithstanding all this, the action of the heart had decreased. When I saw him, the sense of fainting and difficulty of breathing became almost insupportable. I immediately gave him a tea spoonful of æther vitr. and repeated it every ten minutes, till he had taken an ounce, but without the least effect, either on the pulse or his general feelings. I there-

fore continued to give more stimulants; and by eleven o'clock he had taken, in various preparations, in addition to what has been before mentioned, ammon ppr. ʒss. t. opii. gtt. 40. tinct. castor. ʒss. ten drops of the medicine called the black-drop; and two drachms of the sp. ammon. comp. with camphor mixture. At twelve, an enema, with sixty drops of tinct. opii, was administered, and two drachms more of æther had been taken. Friction had been used along the spine with æther and volatile spirit, and also over the sternum. The pulse now became more perceptible, and gradually increased in strength till two o'clock, when he went to sleep, but with the breathing still laborious. At four o'clock he awoke; a blister was applied to the sternum, and he took a draught every four hours, composed of gutt. nigr. gtt. v. aq. ammon. acet. ʒij. mist. camph. ʒj. sal. c. cerv. gr. iv.

“ On the following day he felt nearly recovered; nor did all this quantity of stimulating medicine produce the slightest degree of fever. He has ever since continued in health.”

“ CASE 2, was much slighter. Mr. W. after a long walk, was suddenly seized with great difficulty of breathing and faintness, so as to be unable to stand, or speak distinctly. He was immediately taken home, and I found his face suffused with blood, his breathing difficult, with great anxiety, and his pulse scarcely perceptible. He imagined

himself dying. I gave him immediately two drachms of sp. ammon. c and in ten minutes one drachm of æther, and thirty drops of tincture of opium. In about twenty minutes he was relieved. A blister was however, applied to the chest, and in the course of the evening he took a mixture composed of conf. opiat. ʒj. ammon. ppr. ʒss. aq. cinnam. ʒiij. The next morning he was much better, and has ever since continued well."

The latter of these two cases may at first appear only an attack of common asphyxia; but its affinity to the rest is, I think, distinctly marked, by the suffused appearance of the countenance; which evidently shewed the detention of the blood in the extreme vessels. The former case is however, more remarkable; and its favourable termination seems to be principally owing to Mr. Woodd's judicious and persevering exertions.

December 13, 1808.